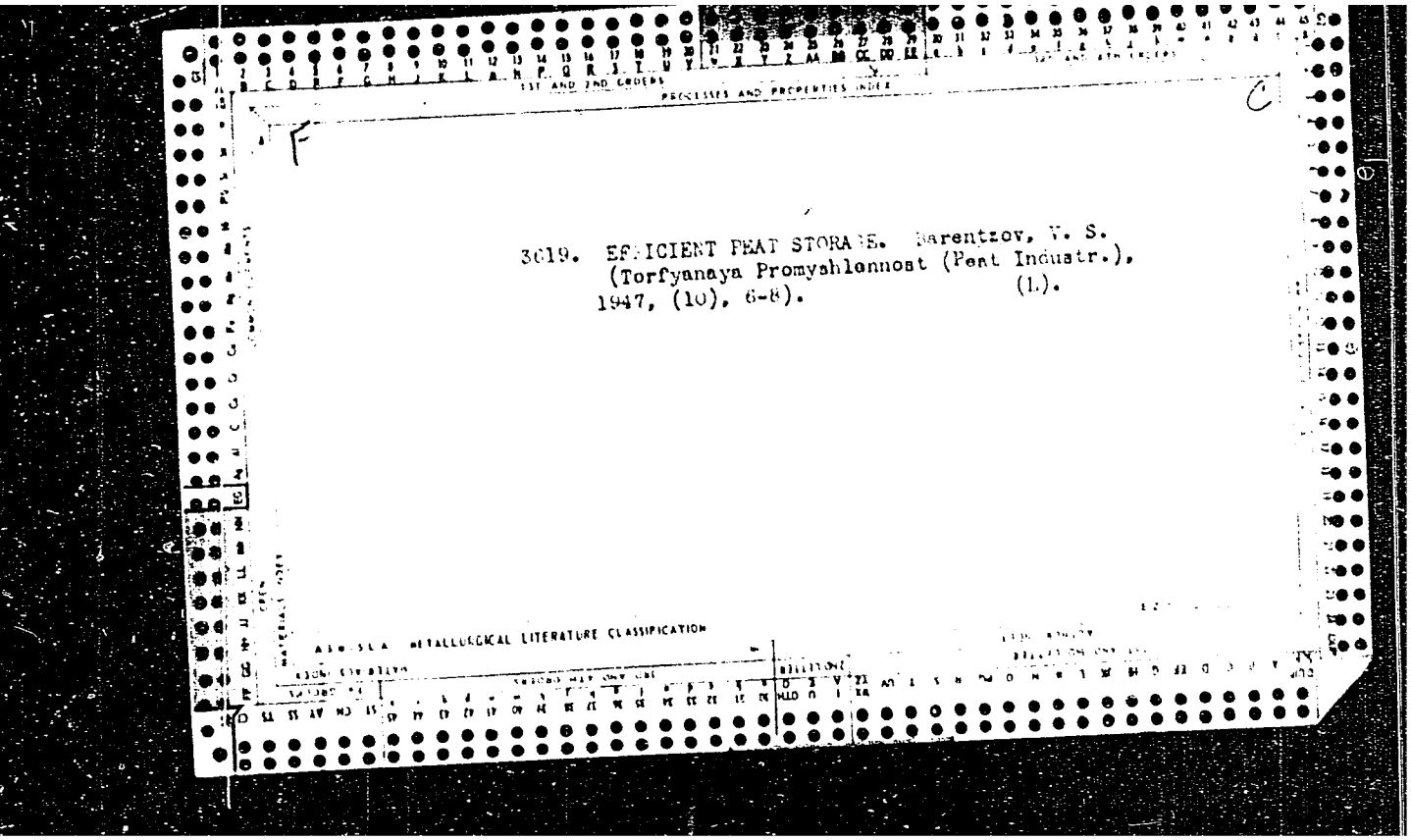


3019. EFFICIENT PEAT STORAGE. Marentzov, V. S. (Torfyanaya Promyshlennost (Peat Industr.), 1947, (10), 6-8). (L).

Changes in external respiration including gas exchange during accelerations can be attributed to biomechanical difficulties and disrupted pulmonary circulation. Here, increased work by diaphragm muscles increases oxygen consumption. At high acceleration magnitudes (12 G and higher), this disruption of gas exchange renders the entire external respiratory process "unprofitable," or inefficient.

Up to 8—12 G, there is an increase in the activity of pulmonary ventilation reflected in accelerated respiration and an increase in per-minute volume. A further increase in acceleration magnitude leads first to relative and then to an absolute decrease in volumetric indices of external respiration. With an increase in acceleration, there is a steady 200 ml/G decrease. An increase in the per-minute respiratory volume in the 8—12 G range is associated with increased O_2 consumption and elevated CO_2 elimination. However, the relative efficiency of pulmonary ventilation decreases as acceleration magnitude increases. The percentage content of O_2 in respired air increases while CO_2 decreases. An analysis of the literature and data from the author's experiments indicate that the nature of qualitative changes in the gaseous composition of respired air is associated with an

increase in physiologically dead space due to changes in pulmonary circulation. Accelerations cause arterial hypoxemia, the severity of which depends on acceleration magnitude and duration. Beyond a dependence on acceleration magnitude, the level of hemoglobin decreases by 60—65%. The general oxygen requirement under these situations also does not depend on acceleration magnitude and is a constant value.

The circulatory system plays a leading role in supplying oxygen to the brain during acceleration. In experiments on human subjects, cerebral circulation and circulation in external vessels of the head were monitored. The force vector of acceleration plays an important part here, especially the longitudinal component. When the value of this component reaches 1.6—1.3 G, there is an increase in the pulsed pooling of cerebral vessels. At 3 G, a normal situation prevails while at 5 G, blood pooling decreases by a factor of two. EEG data was used as an index of the state of cerebral circulation.

In experiments with animals, general oxygen consumption, oxygen tension in tissues, and the tissue

oxidation reduction potential were studied. Here, it was established that during accelerations, there is a displacement of oxygen balance in various tissues with a tendency toward insufficient oxidation which depends on acceleration magnitude and duration as well as specific metabolic qualities of the tissues under study. For instance, the period necessary for the elimination of oxygen depth in the brain was 1.5—2.0 times shorter than for skeletal muscles.

In experiments where animals and humans were exposed to various atmospheric conditions during acceleration (normal, increased oxygen partial pressure, and decreased barometric pressure to 405 mm Hg), it was found that increased oxygen pressure improved resistance to prolonged accelerations. However, when general and cerebral hemodynamics were disrupted due to a high longitudinal acceleration component, this positive effect was eliminated by a disruption of gas exchange. Increased oxygen partial pressure (100 mm H_2O) increased human tolerance of 12 G by 35—40 sec. /ATD PRESS: 5098-F/

SUB CODE: 06 / SUBM DATE: none

L 14285-66 EWT(1)/FS(v)-3 SCTB DD/RD
ACC NR: AT6003869 SOURCE CODE: UR/2865/65/004/000/0349/0360

AUTHOR: Barer, A. S.; Zubavin, V. B.

ORG: none

TITLE: Character of EEG and work capacity in man during exposure to backchest accelerations

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 349-360

TOPIC TAGS: space physiology, EEG, biologic acceleration effect

ABSTRACT: Experiments were conducted on 18 subjects aged 24—34 yrs. In three series of tests the acceleration force vector was 65, 78, and 90° to the longitudinal axis of the body and took place on a large-radius centrifuge. The magnitude of accelerations began at 6 G and increased by 2 G, with the duration varying according to individual tolerance. Both unipolar and bipolar EEG's were taken, and tests were conducted with opened and closed eyes. Some test results are given in Figs. 1—3.

Card 1/4

L 14285-66
ACC NR: AT6003869

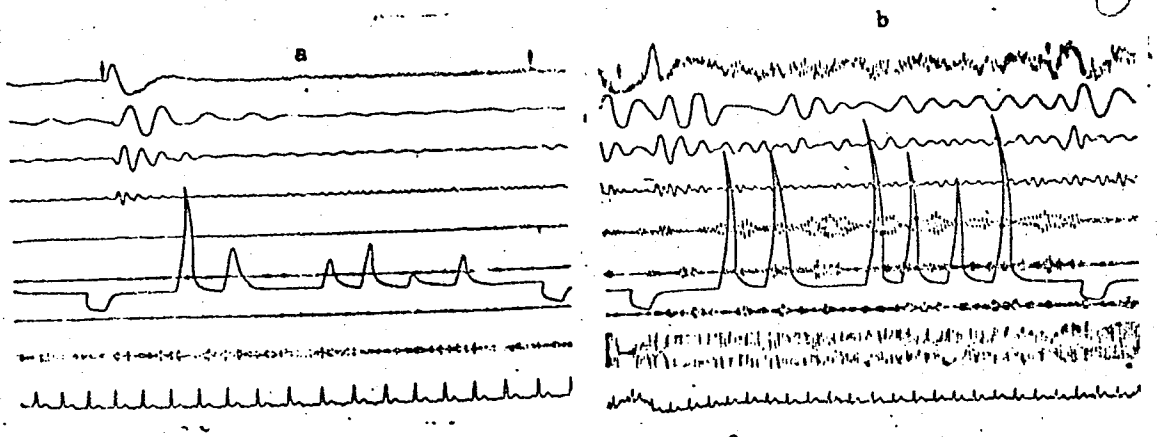


Fig. 1. EEG change at 8 G

a - Prior to acceleration; b - during acceleration; c - arrows indicate command to open and close eyes.

Card 2/4

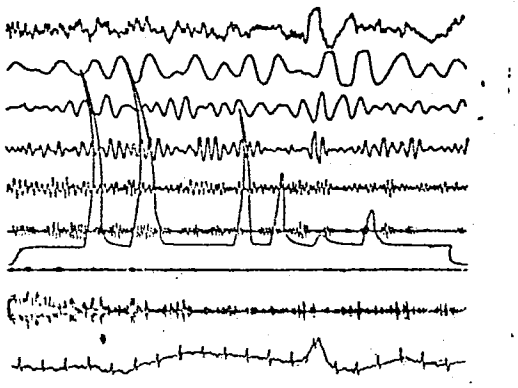


Fig. 2. EEG at 10 G (loss of consciousness)

At 6 G at an angle of 65° the endurance time was 635 sec, at 10 G an average of 58 sec, at 12 G an average of 28 sec, and at 14 and 15 G an average of 18 and 10 sec respectively. The same changes in EEG components observed at 12 G were observed at 14 and 15 G. The latent period of motor reaction responses increased with acceleration magnitude. In the 12-G experiments, the endurance times were 2-2.5 times greater at an angle of 78° than at an angle of 65°. This was attributed to better blood supply of the vital organs at 78°. On the other hand, endurance times at an angle of 90° were less than at 65°, which indicated displacement of internal organs, disruption of breathing, and nausea.

L 14285-66
ACC NR: AT6003869

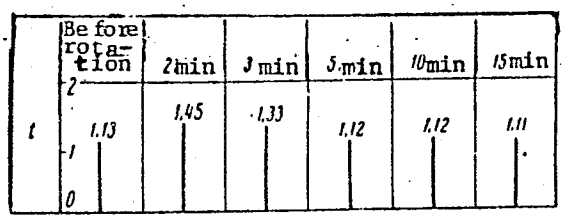


Fig. 3. Latent period of the motor reaction response (sec) before and after exposure to 14 G

It is thought that inhibitory processes in the brain during acceleration are primarily associated with increased afferentation from internal organs and the direct action of inertial forces on basic-tissue. However, in the author's tests at 90° when organ displacement and nausea took place, slow EEG components showed no relative increase, which should have been expected. Orig. art. has: 8 figures.
[ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 013 / OTH REF: 003

Card 4/4

ACC NR: AT6036616 SOURCE CODE: UR/0000/66/000/000/0300/0302

AUTHOR: Parin, V. V.; Agadzhanyan, N. A.; Kuznetsov, A. G.; Barer, A. S.; Isabayeva, V. A.; Mirrakhimov, M. M.; Davydov, G. A.; Kalinichenko, I. R.; Korobova, A. A.; Karpova, L. I.; Nikulina, G. A.; Tikhomirov, Ye. P.; Sokol, Ye. A.; Gavrilov, B. A.

ORG: none

TITLE: Establishing the possibility of using alpine acclimatization for the preparation and training of cosmonauts [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 300-302

TOPIC TAGS: hypoxia, high altitude physiology, alpine acclimatization, cosmonaut training

ABSTRACT:

Tasks of the present study were to:

1. Conduct complex physiological and clinical investigations during the process of acclimatization at altitudes of 3300 to 4100 m.

Card 1/4

2. Study the influence of alpine acclimatization on human tolerance to extremal spaceflight factors.

3. Study the comparative resistance of alpine inhabitants, valley inhabitants, and alpinists to extremal factors.

4. Develop a system of alpine acclimatization for cosmonauts and issue recommendations on the application of alpine acclimatization for the preparation and training of cosmonauts and on the creation of alpine camps for cosmonauts.

Acclimatization was conducted at the alpine station of the Kirgiz State Medical Institute (Tuya-Ashu mountain pass, altitude, 3300 to 4100 m). A total of 28 male subjects were studied of whom: 11 were indigenous to alpine conditions as farmers of the Tien-Shan--Pamir region (2000 to 2500 m), 11 were valley inhabitants, and 6 were accomplished alpinists. The following indices were studied under alpine conditions and using test stands: Functional condition of the central nervous system; external respiratory and cardiovascular system function; some biochemical indices; the state of the blood coagulation and anticoagulation capacity; and in separate experiments; cerebral circulation using an electroplethysmographic method.

ACC NR: AT6036616

These tests demonstrated that resistance to hypoxia was substantially higher after alpine acclimatization. In pressure chamber tests, the "altitude ceiling" increased by 30% and "reserve time" at H = 7500 m was doubled. Its greatest increase was observed in alpine inhabitants while a more substantial increase in "altitude ceiling" was experienced by alpinists.

To study the effectiveness of alpine acclimatization for increasing overall physical work capacity, tests were conducted using an ergometer and treadmill. Maximum work rate increased by 0.4 and 0.5 m/sec in valley inhabitants and alpinists respectively. No changes were noted in foothill inhabitants. Endurance was evaluated according to running duration on the treadmill at a steady rate of 4.5 m/sec. The results of the tests established that after alpine acclimatization, both valley and alpine inhabitants had increased their endurance while alpinists, whose endurances were already high before acclimatization, did not show any substantial changes.

The literature together with experience accumulated by alpinists indicates that alpine acclimatization is far more effective if active (physical exercise) and gradual, each stage entailing a 1000-1500 m increment. The problem of acclimatization periods and methods for the prolonged maintenance of acclimatization effects require further investigation.

W. A. No. 22; ATD Report 66-116 SUB CODE: 06,22 / SUBM DATE: 00May66

Card 4/4

The experiments showed that after 45 days of alpine acclimatization, human tolerance to prolonged, back-chest accelerations (8 to 10 G) was improved. This was reflected in a relative increase in the amplitude of rheoencephalograms for all subjects and consequently, improved cerebral circulation and lowered pulse rate. EKG changes indicated that the heart was undergoing less strain after alpine acclimatization. After residence in alpine conditions, a decrease in basic metabolic indices and a slight increase in arterial blood oxygen saturation was noted in alpine inhabitants during accelerations.

A study of heat tolerance showed that there was a drop in basic physiological parameters (heat accumulation and basal metabolism) after alpine acclimatization in all three groups. These changes were more pronounced in indigenous alpine inhabitants and less pronounced in alpinists.

The resistance of the organism to hypoxia before and after acclimatization was studied using two approaches; exposure to a certain "altitude ceiling" in a pressure chamber and a method of reverse respiration using a spirograph first filled with atmospheric air. In the latter case as a measure of oxygen consumption, oxygen content under the bell jar of the spirograph decreased and exhaled carbon dioxide was chemically absorbed.

APPROVED FOR RELEASE: 06/08/2000 CIA-RDP86-00513R000203620001-7"

BARER, G., inzhener; KOFMAN, S., inzhener.

Two-variety wheat milling in third-class state agricultural flour mills. Muk.-elev.prom. 20 no.5:27-28 My '54. (MLRA 7:7)

1. Odesskiy tekhnologicheskiy institut im. Stalina (for Barer)
2. Odesskiy trest Glavmuki (for Kofman)
(Flour)

BARER, G.; VORONKOV, P.

Short system of two-grade wheat milling. Muk.-elev.prom. 21 no.3: 11-14 Mr '55. (MLRA 8:5)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina.
(Wheat milling)

PAVLOV, A.I., BARER, G.M.

Course of reactions of the mucous membrane of the [illegible] in radiotherapy of neoplastic formations of the [illegible] region and its relation to the absorbed radiation dose. Med. rad. 10 no.5:22-30 My '65.

1. Kafedra rentgenologii i radiologii (zav.- prof. [illegible]), kafedra terapevticheskoy stomatologii (zav.- prof. [illegible]) Moskovskogo meditsinskogo stomatologicheskogo instituta, i 2-ya klinicheskaya radiologicheskaya (zav.- prof. A.F. Pavlov) [illegible] instituta usovershenstvovaniya vrachey, Moskva.

BARER, G.O.; BELETSKIY, V.Ya.; VORONKOV, P.I.; DEMIDOV, P.G.; DZYADZIO, A.M.; DOMBROVSKIY, G.D.; ZOLOTAREV, S.M.; KRAVCHENKO, I.K.; PLATONOV, P.N.; PA[illegible]NKO, A.V.; UGOLIK, N.F.

V. IA. Girshson. Muk.-elev. prom. 23 no.4:23 Ap '57. (MLRA 10:5)
(Girshson, Vasilii IAkovlevich, 1880-1957)

ROMENSKIY, N.V.; BARER, G.O.; KALYUZHNAYA, A.M.

Bread-baking qualities of some varieties of soft wheats of the southern Ukraine. Izv.vys.ucheb.zav.;pishch.tekh. no.5:34-38 '58. (MIRA 11:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra biokhimii i zernovedeniya.
(Ukraine--Wheat--Varieties)

BARER, G.O.; KALYUZHNAYA, A.M.; SAMRO, M.M.

Investigating technological properties of wheat. Izv.vys. ucheb.zav.; pishch.tekh. no.3:11-15 '59. (MIRA 12:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina. Kafedra mukomol'no-krupyanogo proizvodstva.
(Wheat--Analysis)

ROMENSKIY, N.V.; KALYUZHNAYA, A.M.; BARKER, G.O.; ATANAS, L.G.; STOYEVA, O.Z.

Bread baking properties of prospective varieties of wheat. Izv.vys.ucheb.zav.; pishch.tekh. no.6:3-4 '59. (MIRA 13:5)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina. Kafedra biokhimii zerna i zernovedeniya.
(Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNAYA, A.M.

Milling properties of some wheat varieties of the Ukraine. Izv. vys.ucheb.zav.;pishch.tekh. no.5:12-16 '60. (MIRA 13:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V. Stalina. Kafedra mukomol'nogo i kombikormovogo proizvodstv.
(Ukraine--Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNAYA, A.M.

Technological properties of promising Ukrainian wheat varieties. Izv. vys. ucheb. zav.; pishch. tekh. no.4:13-17 '61. (MIRA 14:8)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra tekhnologii mukomol'no-krupyanogo i kombikormovogo proizvodstva.
(Ukraine--Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; KALYUZHNAYA, A.M.; NOKHOTOVICH, A.Ya.

Technological characteristics of wheats of the 1961 crop in the southern part of the Ukraine. Izv.vys.ucheb.zav.; pishch. tekh. no.3:18-20 '63. (MIRA 16:8)

1. Odesskiy tekhnologicheskiy institut imeni Lomonosova, kafedra tekhnologii zerna.

(Ukraine--Wheat)

LEVINSON, A.M.; Prinimali uchastiye: ZIGBERMAN, D.I.; TYMINSKAYA, S.Yu.; ETKIN, Ye.I.; BARGER, I.B.; SLAVSKIY, G.N.

Dynamic balancing of flexible tubular rolls. Bumagodel. mash. no.8:158-163 '60. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut po proyektirovaniyu bumagodelatel'nykh mashin (for Zigberman, Tyminskaya, Etkin). 2. Leningradskiy politekhnicheskiy institut im. Kalinina (for Barger, Slavskiy).
(Papermaking machinery) (Balancing of machinery)

BARER, M.; LIPKIN, P.

Erecting a plant by industrial methods. Stroitel' 2 no.7:3 Jl '56.
(MLRA 10:1)

(Dnepropetrovsk--Precast concrete construction)

LYUDKEVICH, A.V., inzhener; PAS'KO, M.A., inzhener; BARKE, M.N., inzhener.

Introducing the use of large panel interior wall slabs. Sbor. mat. o nov.tekh. v stroi. 17 no.1:17-19 '55. (MLRA 8:2)
(Walls)

SOLOV'YEV, V.; AGLITSKAYA, A.; KULIK, Ya.; BARER, T.

Meat fermentation as a means for improving its quality. Mias. ind. SSSR 33 no.4:51-54 '62. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Solov'yev, Aglitskaya).

BARER, T. L.

Barer, T. L. "On the chemical nature of toxic basesof poisonous herbs which produce alimentary-toxic alexia," Trudy Kuybyshevsk. gos. med. in-ta, Vol. I, 1948, p. 253-61

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

BARER, T.L.; KRUCHININA, M.M.

Using the highly vitaminized Moldavian pepper for the preparation of canned food. Kons. i ov.prom. 15 no.9:25-26 S '60. (MIRA 13:9)

1. Moldavskiy nauchno-issledovatel'skiy institut oroshayemogo zemledeliya i ovoshchevodstva.
(Moldavia--Pepper) (Food, Canned)

CZECHOSLOVAKIA/Fitting Out of Laboratories. Instruments. F.
Their Theory, Construction, and Use.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28583

Author : Vecerikova, V., Fores, F., Charvat, Vl.
Inst : -
Title : The Determination of Particle Sizes of Less Than 0.06 mm. II. Sedimentation Methods.

Orig Pub : Sbirka praci vyzkumn ust, A8, No 17-26, 87-109 (1957) (in Czech with summaries in German, English, and Russian)

Abstract : In checking the sedimentation analysis (SA) methods proposed by Andreazen (A), Delly (B), and Kopetskiy (C), the authors have found that methods A and C give reproducible results for the SA of barytes (I), clays (II), and cinders (III) [TN: slags?]. The dispersing medium used in method A is either water (for I) or a mixture of CCl_4 and methanol (II and III). The method B is applicable for the SA of I but gives nonreproducible results when applied to II and III.

Card 1/1

BARES, Ivo, Ing. CSc.; PRUGAR, Jaroslav, Ing. CSc.

Grain quality of the world wheat assortment. Rost vyroba 11 no.3: 271-280 Mr '65.

1. Chemical Department of the Central Research Institute of Plant Production, Prague-Ruzyne. Submitted December 11, 1964.

BARES, J.

"Physicochemical calculation in science and technology" by Hans Fromherz. Reviewed by J. Bares. Chem listy 57 no.4: 411-412 Ap '63.

L 31592-66 EWP(j)/T IJP(c) RM

ACC NR: AP6022960 SOURCE CODE: CZ/0008/65/000/009/1068/1070

AUTHOR: Bares, Jan; Janacek, Josef

ORG: Institute for Molecular Chemistry, CSAV, Prague (Ustav makromolekularni chemie, CSAV)

TITLE: Condenser for the measurement of the low-temperature dielectric relaxation of hydrophilic polymers

SOURCE: Chemicke listy, no. 9, 1965, 1068-1070

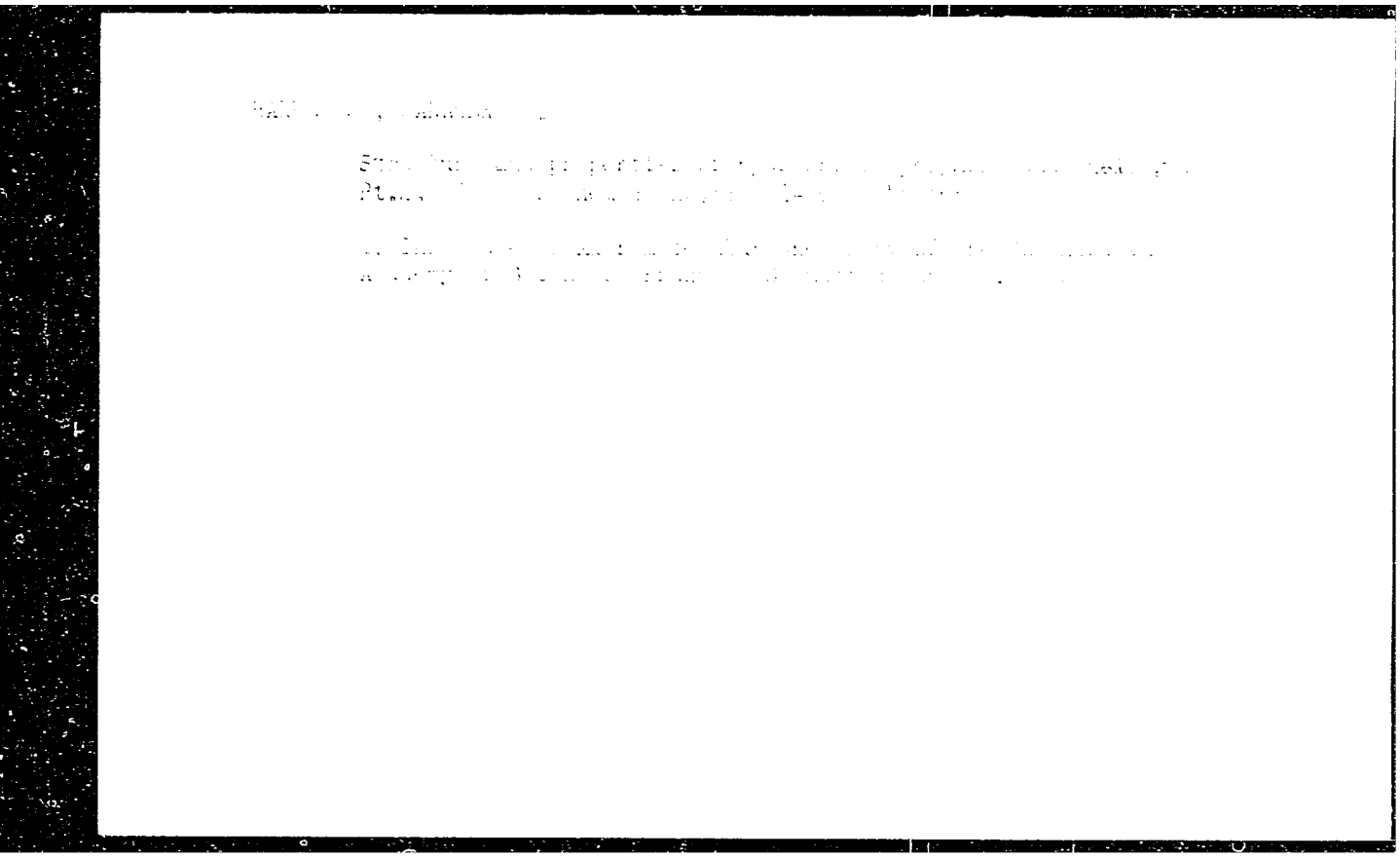
TOPIC TAGS: chemical laboratory apparatus, vacuum technique

ABSTRACT: The authors describe a low-frequency condenser which they designed for vacuum operation. The apparatus can be used at - 180° to 300°C, at 100 to 10,000 cycles, and at vacuums up to 10^{-5} mm Hg. The instrument was designed for vacuum drying of hydrophilic polymers. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 07 / SUBM DATE: 09Sep64 / ORIG REF: 003 / SOV REF: 001
OTH REF: 010

Card 1/1 BLG

0915 1049



KREUZER, Miroslav; BARES, Jiri

Aircraft assembly line repair. Letecky obzor 7 no.4:102-105 '63.

ERDOS, Emerich; BARIC, Jiri

Radiometer with a constant and adjustable hydrodynamic resistance. Chem listy 58 no.1:[illegible] Ja '64.

1. Ustav fysikalni chemie, Ceskoslovenska akademie ved, Praha.

/

IVCHAS, Karel [deceased]; BARES, Jiri; PRDOS, Frerich

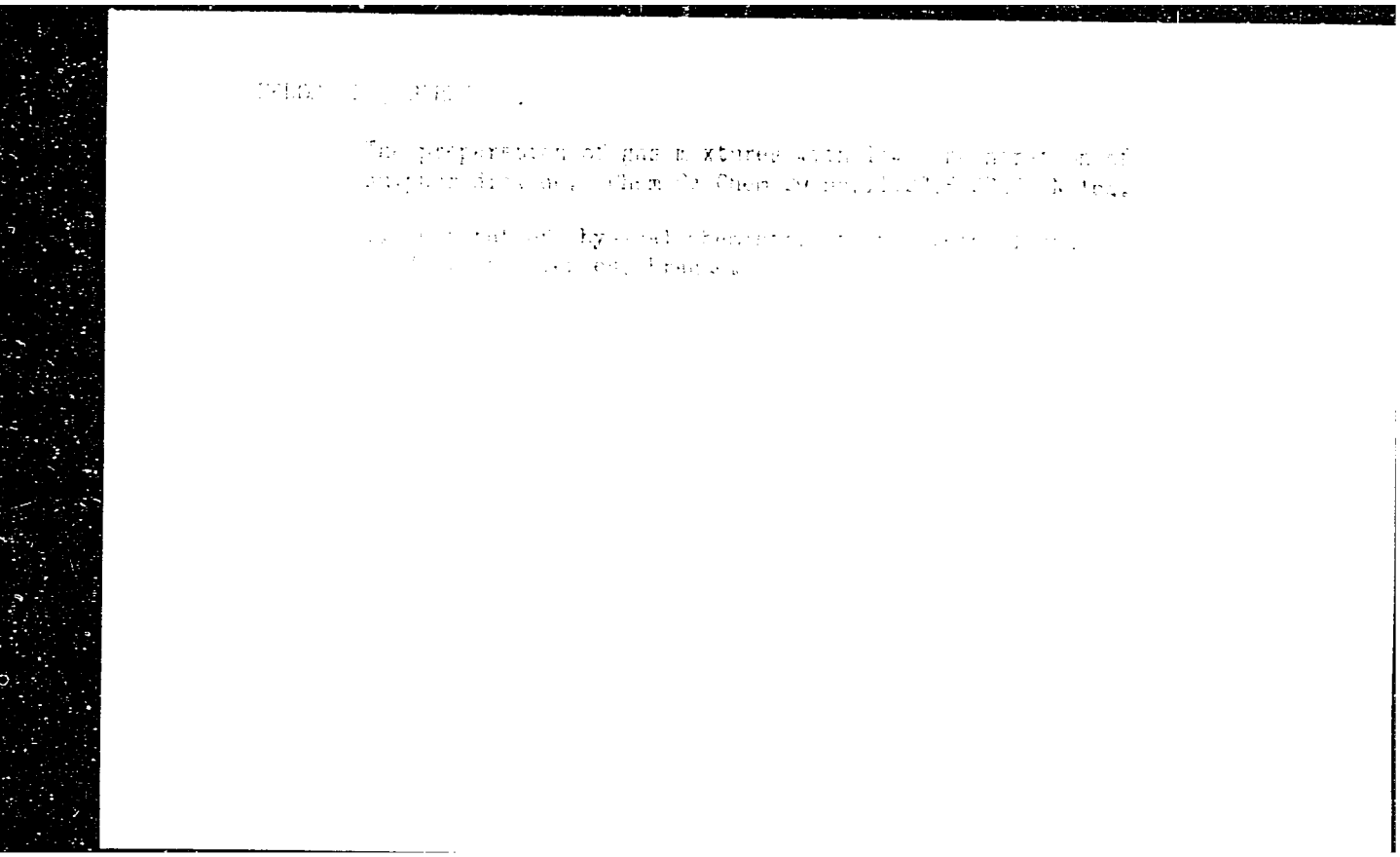
Laboratory preparation of hard glass balls and wool. Chem listy 58 no. 4:454-457 Ap '64.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

ERDOS, Emerich; BARES, Jiri

Absorbers for kinetic measurements. Chem listy 58 no. 4:457-460 Ap '64.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.



CZECHOSLOVAKIA

ERDOS, E; BALES, J

Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague - (for both)

Prague, <u>Collection of Czechoslovak Chemical Communications</u>, No 2, February 1966, pp 427-434

"Direct conductometric microdetermination of sulfur dioxide at low concentration in gases."

BARES, Karel, dr.

Communications and the sales tax. Cs spoje 8 no.5:26-28 O '63.

1. Technicka ustredna spoju, Praha.

BARES, L.

Acute traumatic subdural hydroma in an infant. Cesk. pediat. 18 no.1: 45-48 Ja '63.

1. Neurologicke oddeleni nemocnice v Rumburku, prednosta MUDr. L. Bares.

(VENTRICULOGRAPHY) (HEMATOMA SUBDURAL) (HIDRADENOMA)
(BRAIN NEOPLASMS) (BRAIN INJURY ACUTE)

VORREITH, Milos; BARES, Ludek; BENES, Vladimir; VANCURIK, Josef

Candidiasis of the central nervous system diagnosed by a bioptic test. Cas.lek.cesk 100 no.31:966-971 4 Ag '61.

1. Patologickoanatomicke odd. UVN v Praze, nacelnik pplk. MUDr. M. Vorreith, neurologicke odd. nemocnice OUNZ v Rumburku, prim. MUDr. L. Bares, neurochirurgicka klinika KU v Praze, prednosta gen. prof. MUDr. Z. Kunc a Vojensky ustav hygieny, epidemiologie a mikrobiologie, nacelnik pplk. MUDr. Z. Vlasak.

(MONILIASIS diag) (BRAIN dis)

BARES, Ludek; LUKAS, Edgar

Combined ACTH and pyrabutol therapy in lumbar ischalgias. Cas.lek.cesk 100 no.47:1485-1490 24 N '61.

1. Neurologicke oddeleni nemocnice v Rumburku, prednosta MUDr. L. Bares.

(CORTICOTROPIN ther) (PHENYLBUTAZONE rel cpds)
(SCIATICA ther)

CZECHOSLOVAKIA/Cultivated Plants - [illegible], Vegetables, [illegible]. [illegible]

Abs Jour : [illegible] - Biol., [illegible] 942

Author : [illegible], H.
Inst : -
Title : Cultivation of Dutch [illegible] Peas: [illegible], [illegible] Union.

Orig Pub : [illegible] vysokou urodu, 1957, 5, No 13, 425-426.

Abstract : No abstract.

Card 1/1

BARES, Milan, inz.

Analysis of fat acid esters with saccharose. Prum potravin 14 no.3: 161-164 Mr '63.

1. Vysoka skola chemicko-technologicka, katedra technologie mleka a tuku, Praha.

BARES, Milan

Conference on fat technology. Prum potravin 14 no.10:540-543 O '63.

BARES, Milan, inz.

Analyses of esters of fat acids and saccharose. Prum potravin 14 no. 12:653-655 D '63.

1. Vysoka skola chemickotechnologicka, fakulta potravinarske technologie, katedra technologie mleka a tuku, Praha.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products H
and Their Applications. Instruments and Automation.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12091.

Author : Bares, Miroslav.
Inst : Not given.
Title : Determination of Leakages in Production Equipment.

Orig Pub: Chem. prumysl., 1958, 8, No 3, 140-141.

Abstract: A description is given of a halide leak detector developed in Nil organic synthesis. The sensitivity of the instrument is 4 X 10-3% by weight of CCl_4 in air. -- Ye.Stefanovskiy.

Card 1/1

S/194/62/000/007/030/160
D295/D308

9,2140

AUTHOR: Bareš, Miroslav

TITLE: Time relays as elements of control circuits

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7-2-17 s (Automatizace, v. 4, no. 10, 1961, 307-308 [Czech.])

TEXT: The circuit of an electronic time relay is described. The operating time is set within 0 to 30 sec., and the drop-out time within 0 to 180 sec. and vice versa. The relay is mounted as a unit. Two versions of the circuit are shown. One of the circuits ensures the automatic replacement of a valve in the case of burnout and fault signalling; the second circuit provides process blocking and advance-warning signal for the personnel. Possible fields of application of the time relay are indicated. 4 figures, 12 references. [Abstracter's note: Complete translation.]

Card 1/1

WENDLER, Ljubos, inz.; BARES, Miloslav; SILHANEK, Karel

Morphology of apparent defects of porcelain glazes. Sklar a keramik 15 no.3:78-80 Mr '65.

Causes of the formation of shell-like structure and cracks on glazes. Ibid.:81-83

1. Research Worksite of the Karlovarsky porcelan National Enterprise, Brezova u Karlovych Varu.

BARES, Miroslav; WENDLER, Ljubos, inz.

Evaluation of the quality of silicon carbide for refractory purposes. Sklar a keramik 15 no.3:96-97 Mr '65.

Structure and textures of carborundum saggers. Ibid.:98-100

1. Research Worksite of the Karolovarsky porcelan National Enterprise, Brezoza u Karlovych Varu.

Bares, R.

Testingand evaluation of tests of reinforced-concrete structural elements under load. (To be contd.) p. 65. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 2, Feb. 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

Bares, R.

Testing and evaluation of tests of reinforced-concrete structural elements under load. (Conclusion). p. 122. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 3, Mar. 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

BAZANT, Z.

"Transversal interactions of girder constructions connected by a plate."

ACTA TECHNICA, Praha, Czechoslovakia, Vol. 4, No. 4, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959.

Unclassified.

BARES, R.

"Traverse strength and calculation of precast beam structures. p. 89"

STAVEBNICKY CASOPIS. (Slovenska akademia vied) Bratislava, Czechoslovakia, Vol. 7, No. 2, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6 June 1959
Uncl.

BARES, Richard

Transverse interaction of structures with joint beams of a slab. Acta techn Cz 5 no.2:186-211 '60. (EEAI 9:8)
(Structures, Theory of) (Girders)

BARES, Richard ; [illegible], Pavel

Accurate calculation of orthotropically shaped plates. Acta techn CSAV 7 no.4:3-86 '62.

S/124/63/000/002/052/052
D234/D308

AUTHORS: Bares, Richard and Rosenkranz, Jaromir

TITLE: A new method of detecting cracks in brittle materials

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 76, abstract 2V632 (Stavebn. časop., 1962, 10, no. 6, 378-383 (Czech.: summaries in Rus. and Eng.))

TEXT: The method of determining cracks in materials is based on the use of a conducting varnish placed in the form of a ribbon on the surface of the material under test. The varnish consists of an aqueous dispersion of artificial rubber and silver powder (the varnish is not brittle but conducting). The ribbon is connected to a measuring circuit consisting of current source, ammeter and switch. If a crack appears in the material under the ribbon the temperature of the latter rises at the point of the crack and the ribbon is overheated, interrupting the current. With the aid of this method cracks of two kinds can be determined: 1) microcracks due to shrinkage of the material, existing on the surface

Card 1/2

before the varnish is placed on it, 2) cracks appearing after the varnish has been placed, due to stresses in the specimen. Microcracks 1/10 microns wide (cracks due to stresses can be determined from a width of 1 μ). The method makes it possible to test specimens loaded statically or dynamically. For static loads an indicator and a switch for a determined number of ribbons are used. In the case of dynamical loading a device is connected which records the number of cycles of loading from the beginning of measurement up to the appearance of a crack.
[Abstracter's note: Complete translation]

BARES, Richard, inz., CSc.; HOSEK, Jiri, inz.

Berol, a construction material on the basis of furan resins.
Stav cas 11 no.7:451-463 '63.

1. Ustav teoreticke a aplikovane mechaniky, Ceskoslovenska akademie ved, Praha.

BARES, Richard, inz. CSc.

Some supplements to the Guyon-Massonnet method of computing beam grillages. Acta techn Cz 9 no.5:440-476 '64.

1. Czechoslovak Academy of Sciences, Prague 2 -- Nove Mesto, Vysehradska 49. Submitted on November 27, 1962.

BARES, Richard, inz. CSc.

Calculation of ceiling grillages. Inz stavby 12 no.11:501-505 N '64.

1. Institute of Theoretical and Applied Mechanics of the Czechoslovak Academy of Sciences, Prague.

BARESH, I.

Pole peas for seed. Selskostop nauka 2 no. 3/4 447-450 '63.

BARESHKO, A.; TRIGUB, I.

Business accounting is the basis of success. Sov. profsoiuzy 6 no.1:65-67 Ja '58. (MIRA 11:1)

1.Predsedatel' postroyechnogo komiteta stroitel'nogo upravleniya No.774 (for Bareshko). 2. Nachal'nik planovogo otdela stroitel'nogo upravleniya No.774 (for Trigub).
(Bricklaying)

POKORNY, J.; DULEK, D.; BARESOVA, M.

Generalized thromboangiitis obliterans & arteriosclerosis obliterans & their manifestations in the arms. Sborn. lek. 59 no.4:129-133 Apr 58.

1. IV. interni klinika fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. Dr B. Prusik. J. P., Mecislavova 18, Praha-Nusle.

(THROMBOANGIITIS OBLITERANS, manifest.
arm (Cz))
(ARTERIOSCLEROSIS OBLITERANS, manifest.
arm (Cz))

ZOULEK, D.; POKORNY, J.; BARESOVA, M.

Thromboangiitis obliterans & arteriosclerosis obliterans in women. Sborn. lek. 59 no.4:134-138 Apr 58.

1. IV. interni klinika fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. Dr. B. Prusik. J. P., Mecislavova 18, Praha 14.
(THROMBOANGIITIS OBLITERANS
in women (Cz))
(ARTERIOSCLEROSIS OBLITERANS
in women (Cz))

BAREV, Dimitur, inzh., ml. n. sutrudnik

For a faster introduction of scientific achievements in farm mechanization. Tekh delo 13 no.427:3 19 My '62.

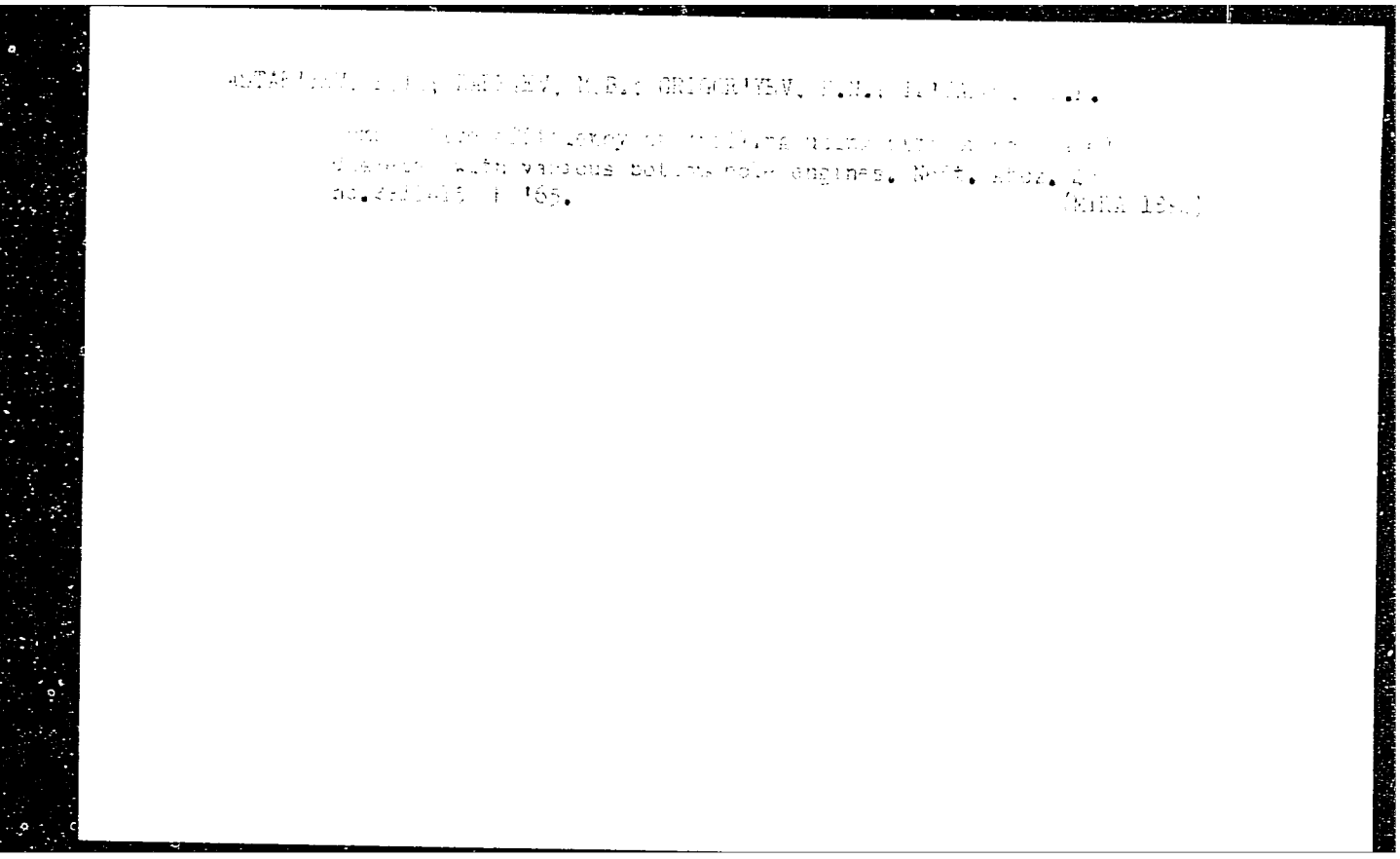
1. Tsentralen nauchnoizsledovatelski institut po mekhanizatsiia na selskoto stopanstvo.

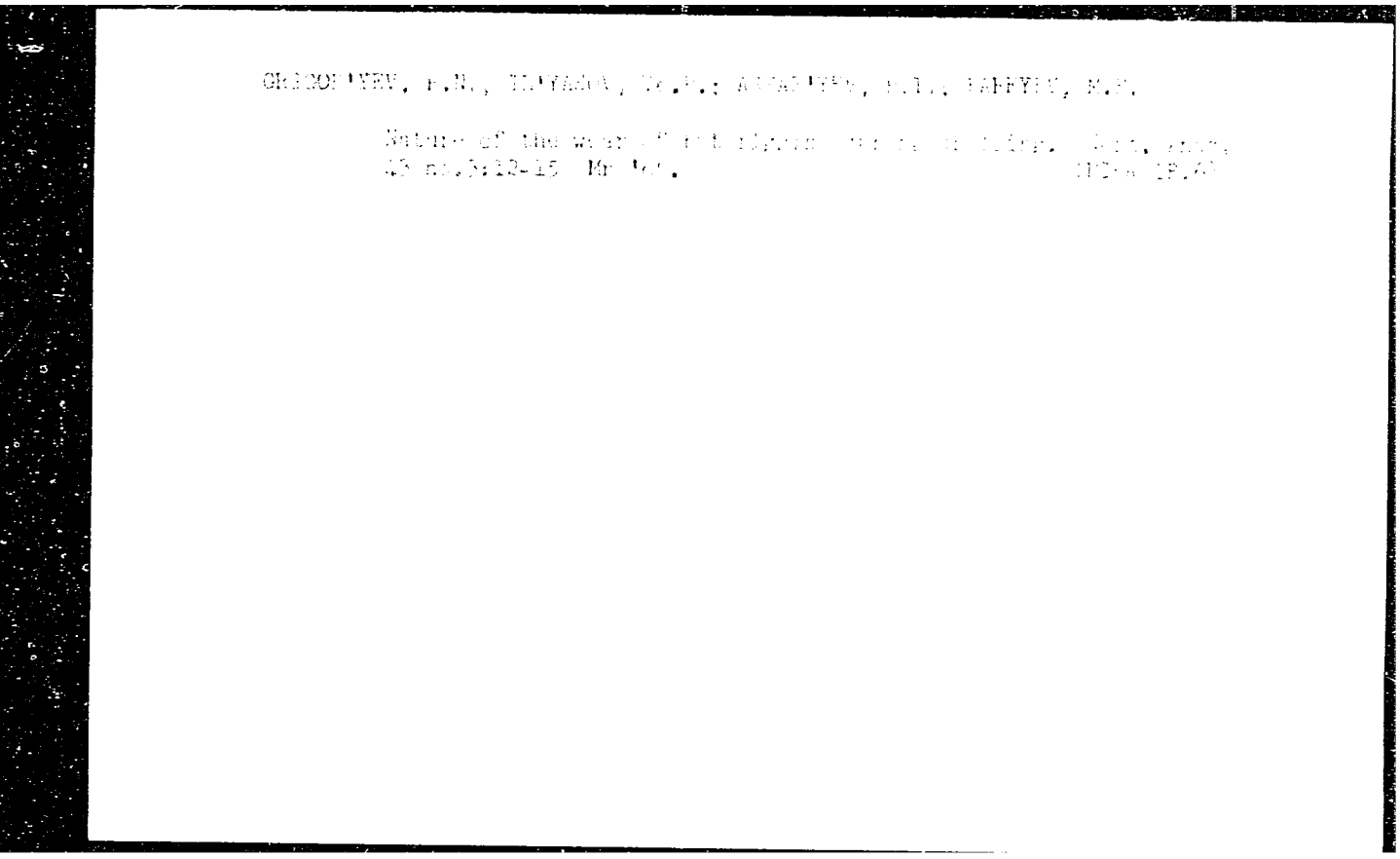
BAREV, Dimitur

An international conference on mechanized growing of sugar beets. Selskestop nauka 1 no.7/8:880-881 '62.

GRIGOR'YEV, P.[illegible] ASTAF'YEV, P.I.; BAREYEV, M.B.

[illegible]d for processing factual data on drilling techniques. Neft. khoz. 43 no.9:1-7 S '65. (MIRA 18:10)





DIKENSHTEYN, G.Kh.; KUTUZOVA, V.V.; MASHKYKOV, K.K.; BABAYEV, A.G.; FOL'STER, L.A.; YUFEREV, R.F.; SHISHOVA, A.I.; BAREYEV, R.A.; MAKAROVA, L.N.; MURADOV, K.; FYANOVSKAYA, I.A.; SEMOV, V.N.; SIROTINA, Ye.A.; TURKINA, I.S.; FEL'DMAN, S.L.; KHON, A.V.; KUNITSKAYA, T.N.; GOLENKOVA, N.P.; ROSHINA, V.M.; FARTUKOV, M.M.; SHCHUTSKAYA, Ye.K.; ALTAYEVA, N.V.; BYKADOROV, V.A.; KOTOVA, M.S.; SMIRNOV, L.M.; IBRAGIMOV, M.S.; KRAVCHENKO, M.F.; MARKOVA, L.F.; ROZHYEVA, T.R.; UZAKOV, O.; SLAVIN, P.S.; NIKITINA, Ye.A.; MILOGRADOVA, M.V.; BARTASHEVICH, O.V.; STAROBINETS, I.S.; KARIMOV, A.K.

[Splicing of the wires of overhead power transmission lines] Soedinenie provodov vozdushnykh linii elektroperedachi. Moskva, Energiia, 1964. 69 p. (Biblioteka elektromontera, no.132) (MIRA 17:9)

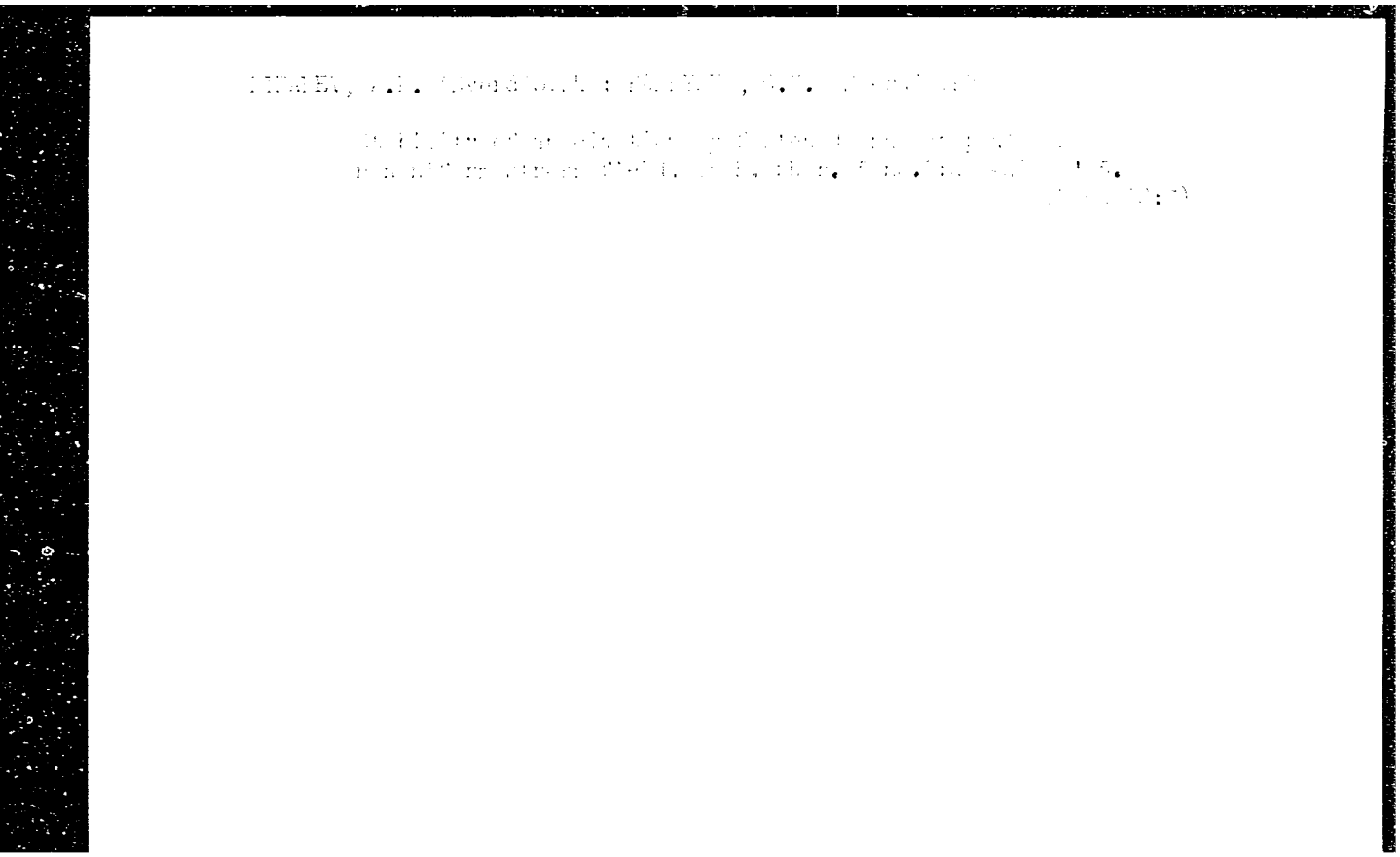
BAREYEV, [illegible]; [illegible]

Time of the formation of local structures and the oil fields of the Yelabuga-Bondyug zone of uplifts. Geol. nefti i gaza 8 no.8:39-44 Ag '64. (MIRA 17:8)

BAREYEV, Yemel'yan Savel'yevich. Prinimali uchastiye: ZHELDAKOV, M.Ye., geolog; KARLOVA, I.N., geolog. BABAKHOVA, N.Kh., red.; MARINYUK, M.V., tekhn.red.

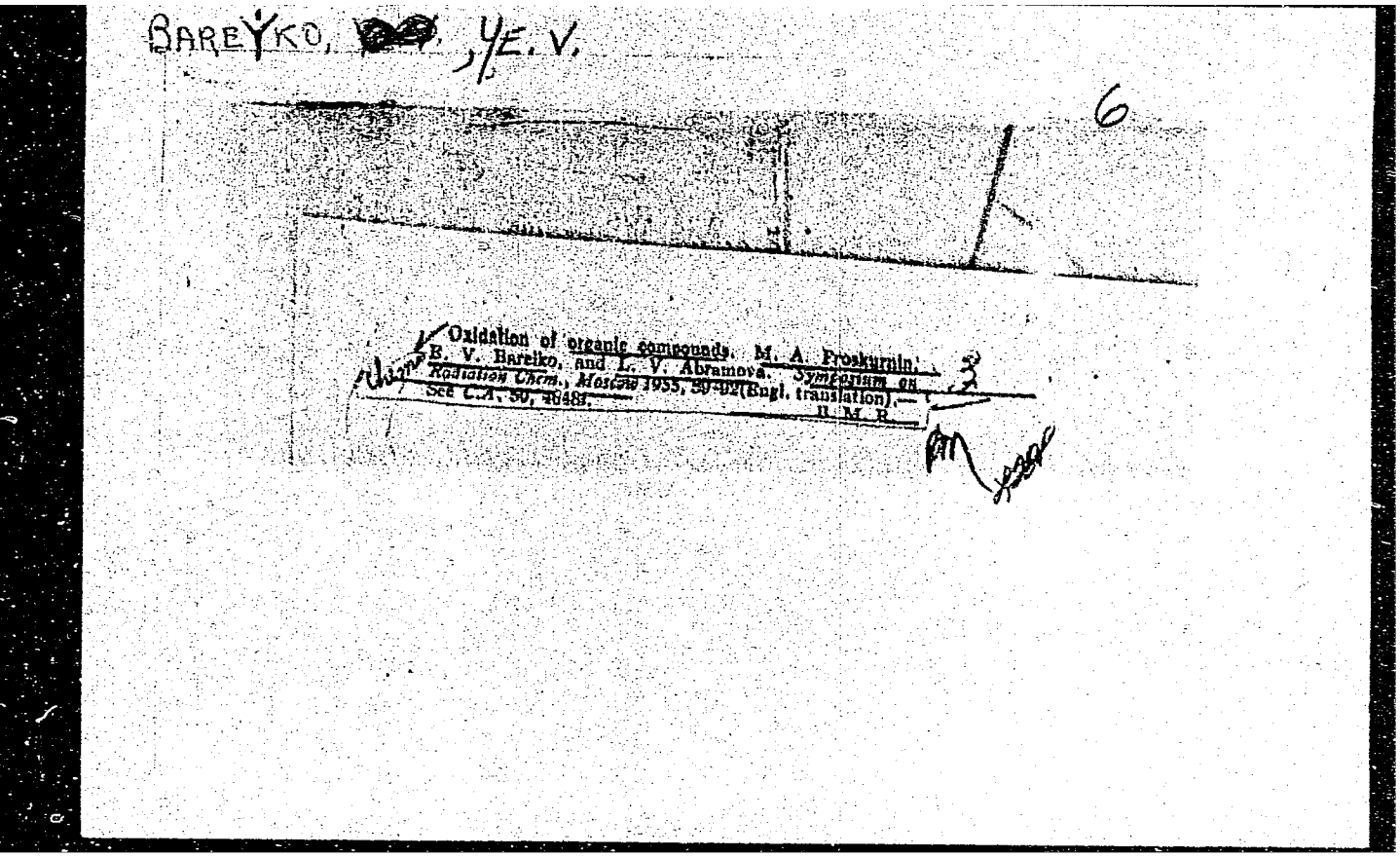
[Local raw materials for building materials; mineral raw material resources in Rostov Province] Mestnoe syr'e dlia stroitel'nykh materialov; mineral'nye syr'evye resursy Rostovskoi oblasti. Rostov, Rostovskoe knizhnoe izd-vo, 1960. 346 p.
(MIRA 14:2)

(Rostov Province--Mines and mineral resources)
(Rostov Province--Building materials)



BARSYKO, S. (Gorki, Mogilevskaya bolast')

Advanced training for nonprofessional medical workers. Fel'd. i akush. 22 no.11:63 N '57. (MIRA 11:2)
(MEDICINE--STUDY AND TEACHING)



BAREYKO, [redacted], YE. V.

6

Oxidation of organic compounds. M. A. Proskurnin, E. V. Bareiko, and L. V. Abramova. *Symposium on Radiation Chem., Moscow 1955*, 59-62 (Engl. translation). — See C.A. 50, 16483.

U. M. R.

BAREZHNAYA, V.T., BUKHALOVA, G.A.

Ternary systems of strontium fluoride and alkali metal fluorides.
Zhur. neorg. khim. 5 no.4:925-929 Ap '60. (MIRA 13:7)

1. Rostovskiy inzhenerno-stroitel'nyy institut.
(Strontium fluoride) (Alkali metal fluorides)

BARFALOMEYEVA, A. A., and KOVAL'SKIY, G. N.

"Concerning the Article by P. F. Khoruzhenko, 'The Epidemiology of Swamp Fever,'" by A. A. Barfalomeyeva and G. N. Koval'skiy, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 27, No 9, Sep 56, pp 106-107

This review says that the article by Khoruzhenko which deals largely with the question of revising the role of mouselike rodents in the genesis of "epidemic foci of swamp fever" does not present enough data to justify a change in existing theories concerning the endemic nature of this disease. Conflicting and inconsistent statements by Khoruzhenko regarding the commonly held opinion that these rodents play a leading role as reservoirs of leptospirosis in nature are criticized.

The authors take issue with Khoruzhenko's pronouncement that cattle are the primary reservoir of swamp fever in the Ukraine, and cite references from Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, other journals, and collected works which also treat this subject. They also object to Khoruzhenko's presentation of widely known facts as "new." It is stated that his observations on the incidence of infectious jaundice among cattle give him no basis for discounting the role of mouse like rodents as "insignificant." Khoruzhenko's attempt to establish an inverse relationship between the abundance and fullness of water reservoirs and the incidence of this disease is disputed. The authors feel that other epidemiological factors existing in a given locality must be taken into account.

They object to Knoruzhenko's emphasis on timely recognition of leptospirosis among agricultural animals; he mentions the necessity of informing veterinarians of cases of disease among humans, but neglects the responsibility of veterinary workers to carry out antiepidemic measures. He does not touch on the necessity for systematic prophylaxis by veterinary organizations as the most effective means of controlling leptospirosis among humans and animals.

After recommending several measures for reducing the incidence of leptospirosis among humans, they reiterate the conclusion that Khoruzhenko's article does not present adequate grounds for revising existing opinions concerning the epizootological and epidemiological role of mouselike rodents. It is the reviewers' opinion that premature revision of these facts could have an unfavorable effect on antiepidemic work.

Sum 1258

BARTOLOMEYEV, A. A.

"The Detectors of Charged Particles with Emulsions without Carrier," Usp. fiz. nauk, 57, pp 701-713, 1955

Translation D 419421, page 101

BARTOLOMEYEV, A. A., ROMANTSEVA, A. S. and KUTUKOVA, V. M.

"The Angle Distribution of Fragments on the Occasion of the Fission of Uranium 238 by Neutrons of Different Energies," Dokl. AN SSSR, 105, pp 693-695, 1955

Translation D 11942l, page 25

BARFOLOMEYEV, A.A.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1409
AUTHOR BARFOLOMEEV, A.A., GERASIMOVA, P.I.
TITLE The Spallation of Beryllium- and Carbon Nuclei as a Result of the Capture of Negative Pions.
PERIODICAL Žurn. eksp. i teor. fis, 30, fasc. 6, 1166-1167 (1956)
Issued: 8 / 1956 reviewed: 10 / 1956

For the purpose of investigating such spallations the σ-stars on beryllium and carbon were investigated. Be- and C-powder with from 5 to 10 μ crystal diameter were introduced into a photoemulsion, and from the colloidless emulsion layers a stack of from 2 to 2,5 mm thickness was formed. The powder of the substance to be investigated was present only in the 3-4 middle layers of a total of 10 layers. Collisions were irradiated with a bundle of slow negative pions of the synchrocyclotron of the Institute for Nuclear Problems of the Academy of Science. On the occasion of the examination of 4 cm^2 of the emulsion 7 acts of absorption of negative pions on carbon and 12 on beryllium were found to occur. The particles produced on the occasion of nuclear spallations, protons, deuterons, tritons, particles with a twofold charge, and not identified particles with short traces, are shown in a table. In the case of Be the average number of rays in the stars is 1,15 ± 0,23. In about a quarter of the cases (28±12%) the absorption of a negative pion does not lead to the emission of charged particles. On the average, not more than one particle with a simple charge is emitted from a Be-nucleus on the occasion of each spallation, and the average energy of the particles is 5-10 MeV. From the energy spectrum of the particles emitted on the occasion of nuclear spallation it is possible

to draw direct conclusions with respect to the spectrum of the primary particles. From the stars on Be and C no tritons with energies of more than 10 MeV are emitted, and consequently the fast tritons are not produced during primary processes. The data obtained are in contradiction to the model according to which the negative pion is absorbed by a He^4 -like system. Also the model by M.G.K. MENON et al., Phil.Mag., 41, 583 (1950) is in contradiction to the facts mentioned here. On the occasion of the spallation of a Be-nucleus an average energy of from 10 to 15 MeV is used for the emission of charged particles. Thus, about 10 times as much energy is used for the emission of neutral particles as for the emission of charged particles.
The experimental data obtained for the σ!stars on Be and C obviously indicate that a great part of the rest energy of the negative pion is absorbed during the primary act by one or two neutrons. In a nucleus that is as light as that of beryllium they are only rarely subjected to collisions and thus they transport away a considerable part of the energy without transmission to charged particles.

INSTITUTION: Academy of Science in the USSR

BARFOLOMEYEV A.A.

SUBJECT	USSR / PHYSICS	CARD 1 / 2	PA - 1668
AUTHOR	BARFOLOMEEV,A.A., GERASIMOVA,R.I., KARPOVA,L.A.		
TITLE	A Possible Example for the Anomalous Decay of a Hyperfragment.		
PERIODICAL	Dokl.Akad.Nauk, 110, fasc.5, 758-760 (1956)		
	Issued: 12 / 1956		

A packet of 56 emulsion layers of 330 μ thickness each, which was irradiated in the stratosphere, was used for the purpose of studying unstable particles. One of the secondary stars found was ascribed to an unstable fragment decaying with an abnormally low emission of energy. The primary star was of the type 18 + 4n and it emitted a particle a which decayed after passing through 39 μ and emitting two charged particles b and c. Both came to a standstill in the emulsion after 15,5 mm and 4,5 μ respectively. The traces of a, b and c were complanar up to 2°. The charge of the particle a was $z_a \leq 3$ and probably even $z_a < 3$. However, at least the mass of the particle a was probably larger than that of the proton. The trace of b originated from a negative pion which had come to a stop in the emulsion. Taking account of a possible straggling its energy is assumed to be 29,4 ± 1,2 MeV. In the case investigated here it is impossible that a Σ^--hyperon is concerned. It follows from the shortness of the trace that spallation may be caused by the capture of a Σ^--hyperon by a light nucleus of the type C,N,O, but not by a heavy nucleus like Ag and Br.

The process investigated is apparently the decay of an instable fragment associated to a Λ^0-particle. No decay scheme with the creation of two particles

Dokl.Akad.Nauk,110,fasc.5, 758-760 (1956) CARD 2 / 2 PA - 1668

agrees with the experimental results. Among the analyzed schemes with creation of three particles the following come into question:

$\Lambda^{H^3} \rightarrow \pi^- + He^3 + \gamma + Q_1$; $Q_1 = 50 \pm 8$ MeV, $B_\Lambda = -7,5 \pm 9$ MeV.

$\Lambda^{H^4} \rightarrow \pi^- + He^4 + \gamma + Q_2$; $Q_2 = 51 \pm 9,5$ MeV, $B_\Lambda = -6 \pm 10$ MeV.

$\Lambda^{He^7} \rightarrow \pi^- + Li^6 + n + Q_3$; $Q_3 = 35,5 \pm 2,2$ MeV, $B_\Lambda = 4,2 \pm 2,4$ MeV.

At present about 100 acts of decay of hyperfragments are known. If the schemes (1) or (2) are recognized as valid the case investigated here might correspond to a relative probability of the radiation decay of the hyperfragment of ~ 1%. Apparently the creation mechanism of the γ-quantum can, in the case under investigation, be the same as on the occasion of the anomalous $\pi - \mu$- decay with a short range of the emitted myons and as in the case of the radiation decay of a τ-meson with the decay scheme $\tau \rightarrow 3\pi + \gamma$ (this is the case all the more as, according to T.EGUCHI, Phys.Rev.85,943 (1952), and other works, the probability of the radiation decay of the fragment and also the probability of the reactions $\pi \rightarrow \mu + e + \gamma$, $\tau \rightarrow 2\pi + \gamma$ and $K \rightarrow \mu + \nu + \gamma$ are near 1%). Of the remaining rays of the primary ray 20 traces belong to stable particles and 2 traces do not end in the emulsion packet.

INSTITUTION:

BARFOLOMEYEV, A.A. BARFOLOMEEV, A.A

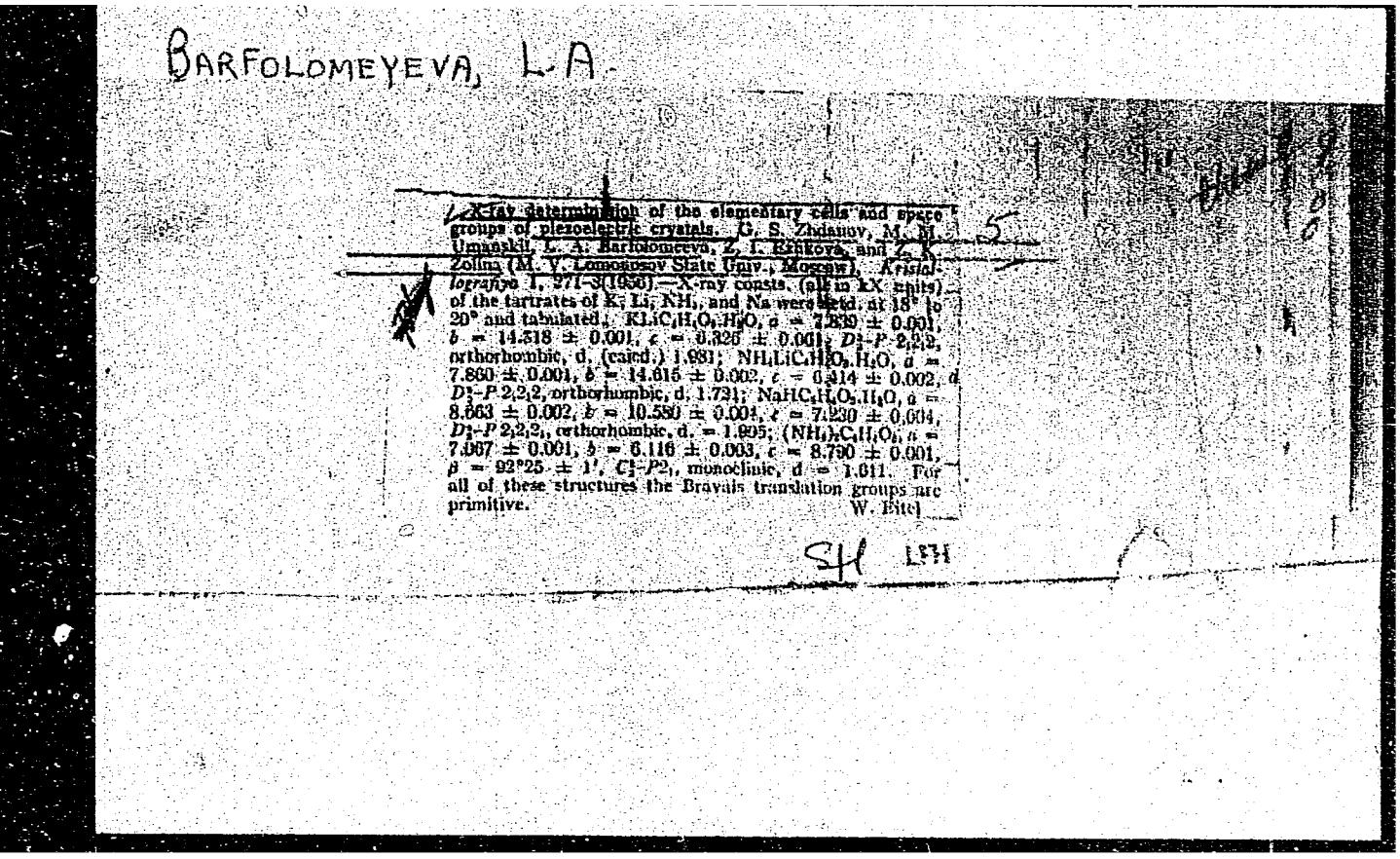
SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1795
AUTHOR BARFOLOMEEV,A.A., GERASIMOVA,R.I., KARPOVA,L.A.
TITLE The K-Meson-like Decay of a slow Secondary Particle.
PERIODICAL Dokl.Akad.Nauk, 110, fasc.6, 959-962 (1956)
Issued: 1 / 1957

The same authors (A.A.BARFOLOMEEV et al., Dokl.Akad-Nauk, 110, No 5 (1956)) discovered a K-meson-like decay of a secondary particle when investigating the emulsion layers irradiated in form of an emulsion stack. A slow particle flies away out of an apparently primary star of the type 12 + ON leaving a trace of 26 μ. At the end of this trace begin two traces of charged particles, the data of which are given. On the basis of all data mentioned here, the trace of one of the charged particles is ascribed to a K-meson. If the mass of this particle is $\sim 965\ m_e$, the value 65 + 5 MeV is obtained for its initial energy. From the trace of the primary particle it is difficult to draw conclusions as to its nature, for this trace is short and steep in the emulsion. In any case, however, this particle is slow and its kinetic energy is by no means sufficient for the creation of a K-meson. This K-meson is probably the secondary particle of some "heavy" hyperon with the mass $m_H \geq m_N + m_K + 60$ MeV or of a "heavy" meson with the mass $m_X \geq m_K + 60$ MeV. Here m_N and m_K denote the mass of the nucleon and K-meson respectively. In this connection the secondary star (with the two traces of charged particles) may in principle have been caused by a nuclear spallation caused by a "heavy" hyperon (meson), by its decay, or by the decay of an unstable

Dokl.Akad.Nauk, 110, fasc.6, 959-962 (1956) CARD 2 / 2 PA - 1793

fragment (which associated the "heavy" hyperon (meson)). The here suggested "heavy" hyperon (meson) might decay under emission of a K-meson. However, this "heavy" particle must differ from the known K-mesons and hyperons not only by a greater mass but also by another value of the "strangeness" S. Probably, this "heavy" particle does not belong to a charged multiplet the components of which contain particles with a charge greater than 1. Only the following charged singulets are able to satisfy the above conditions: positive meson X^+ (S = + 2), negative meson X^- (S = - 2), positive hyperon Y^+ (S = + 1), negative hyperon Ω^- (S = - 3).
This secondary star could n o t have been created by the following reactions: decay of a simply charged elementary particle; decay of an unstable fragment containing one of the particles X^+, X^-, Y^+ or Ω^- (which, in principle, are possible); spallation of a nucleus of the emulsion as a result of the capture of a X^+, Y^+ or Ω -particle. Thus the mechanism of the emission of K-mesons by slow secondary particles remains unexplained. The emitted particle might rather be a "heavy" meson X^- than a heavy hyperon.

INSTITUTION:



BARTOLOMEYEVA, L.A.

X-Ray determination of the elementary cells and space groups of piezoelectric crystals. G. S. Zhdanov, M. M. Umanskii, L. A. Bartolomeeva, Z. I. Rinkova, and Z. V. Zolina (M. V. Lomonosov State Univ., Moscow). *Kristallografiya* 1, 271–3(1956).—X-ray consts. (all in kX. units) of the tartrates of K, Li, NH_4, and Na were detd. at 18° to 20° and tabulated: $KLiC_4H_4O_6.H_2O$, $a = 7.839 \pm 0.001$, $b = 14.518 \pm 0.001$, $c = 6.326 \pm 0.001$; D_2^1-P 2,2,2, orthorhombic, d. (calcd.) 1.981; $NH_4LiC_4H_4O_6.H_2O$, $a = 7.860 \pm 0.001$, $b = 14.615 \pm 0.002$, $c = 6.414 \pm 0.002$, D_2^1-P 2,2,2, orthorhombic, d. 1.731; $NaHC_4H_4O_6.H_2O$, $a = 8.663 \pm 0.002$, $b = 10.580 \pm 0.001$, $c = 7.230 \pm 0.004$, D_2^1-P 2,2,2, orthorhombic, d. = 1.905; $(NH_4)_2C_4H_4O_6$, $a = 7.967 \pm 0.001$, $b = 6.116 \pm 0.003$, $c = 8.790 \pm 0.001$, $\beta = 92°25' \pm 1'$, C_2^1-$P2_1$, monoclinic, d = 1.611. For all of these structures the Bravais translation groups are primitive.
W. Eitel

BARG, A.Ya. (Mikolaiv)

Determining the ultimate load for orthotropic and isotropic plates and bars [with summary in English]. Prykl.mekh. 5 no.1: 18-28 '59. (MIRA 12:6)

1.Mikolaivs'kiy sudnobudivniy institut.
(Elastic plates and shells)

BARG, A.Ya. [Barh, A.IA.] (Nikolayev)

Compound bending and the stability of a bottom covering. Prykl. mekh. 4 no.3:326-333 '58. (MIRA 13:8)

1. Nikolayevskiy sudostroitel'nyy institut.
(Structural frames)

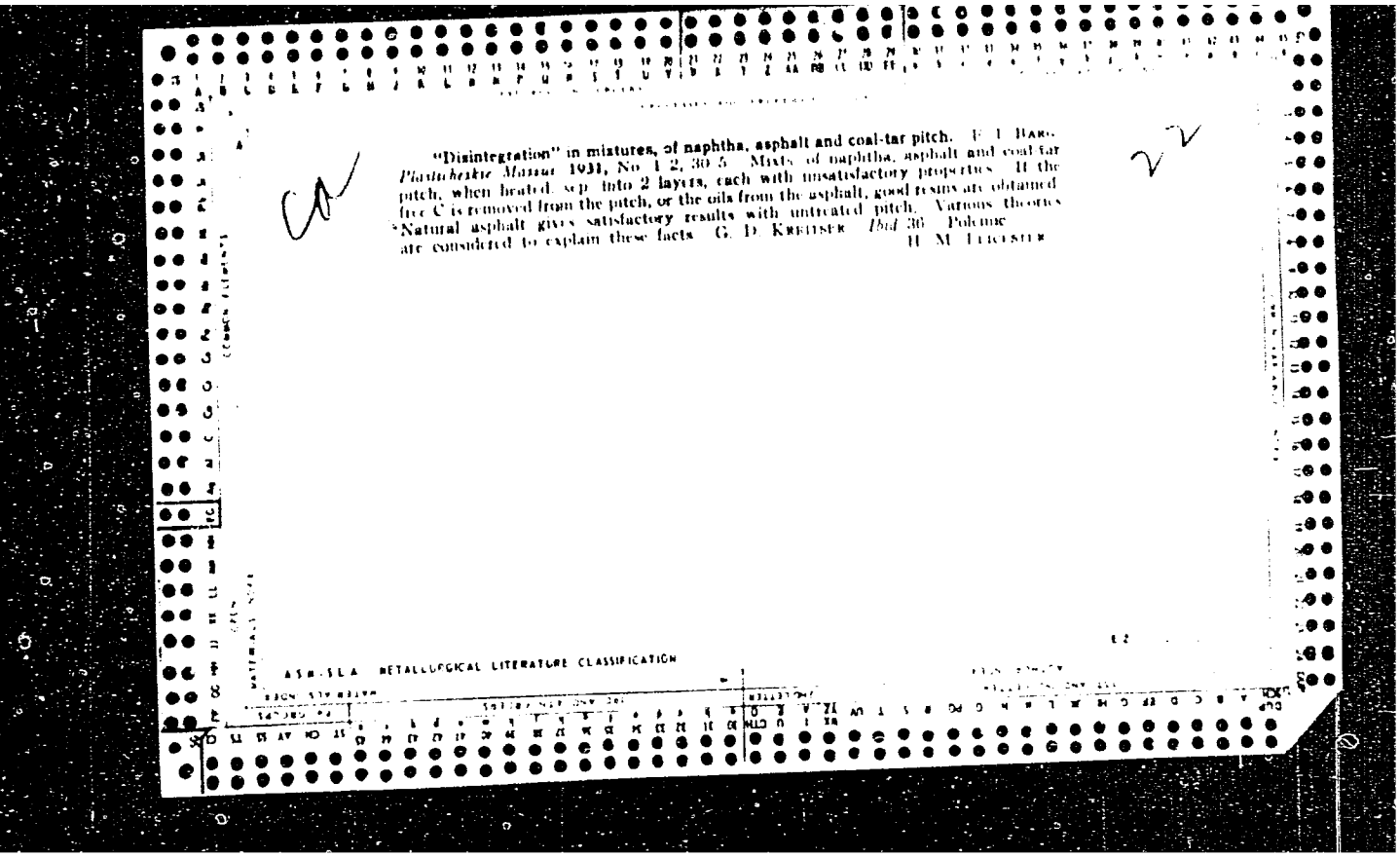
BARG, B.

SCIENCE

Periodical: STUDIA GEOPHYSICA ET GEODAETICA. Vol. 3, no. 1, 1959

BARG, B. A contribution to the problem of the orographic influence of the South Norwegian mountain on the cyclone-generating events and on the atmospheric pressure in Skagerrak in general. In German. p. 92.

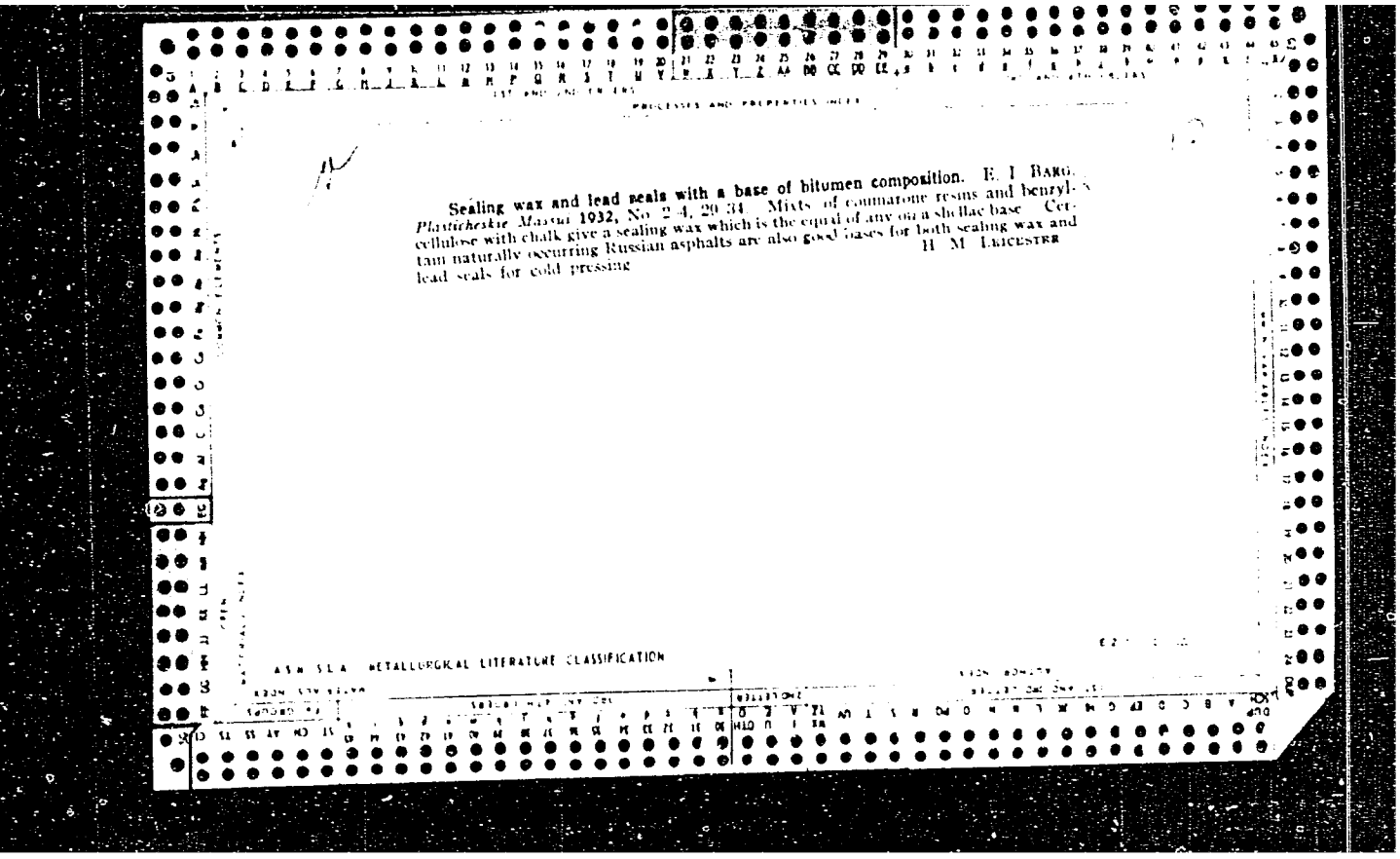
Monthly List of East European Accessi ons (EEAI) LC, Vol. 8, No. 5, May 1959, Unclass.



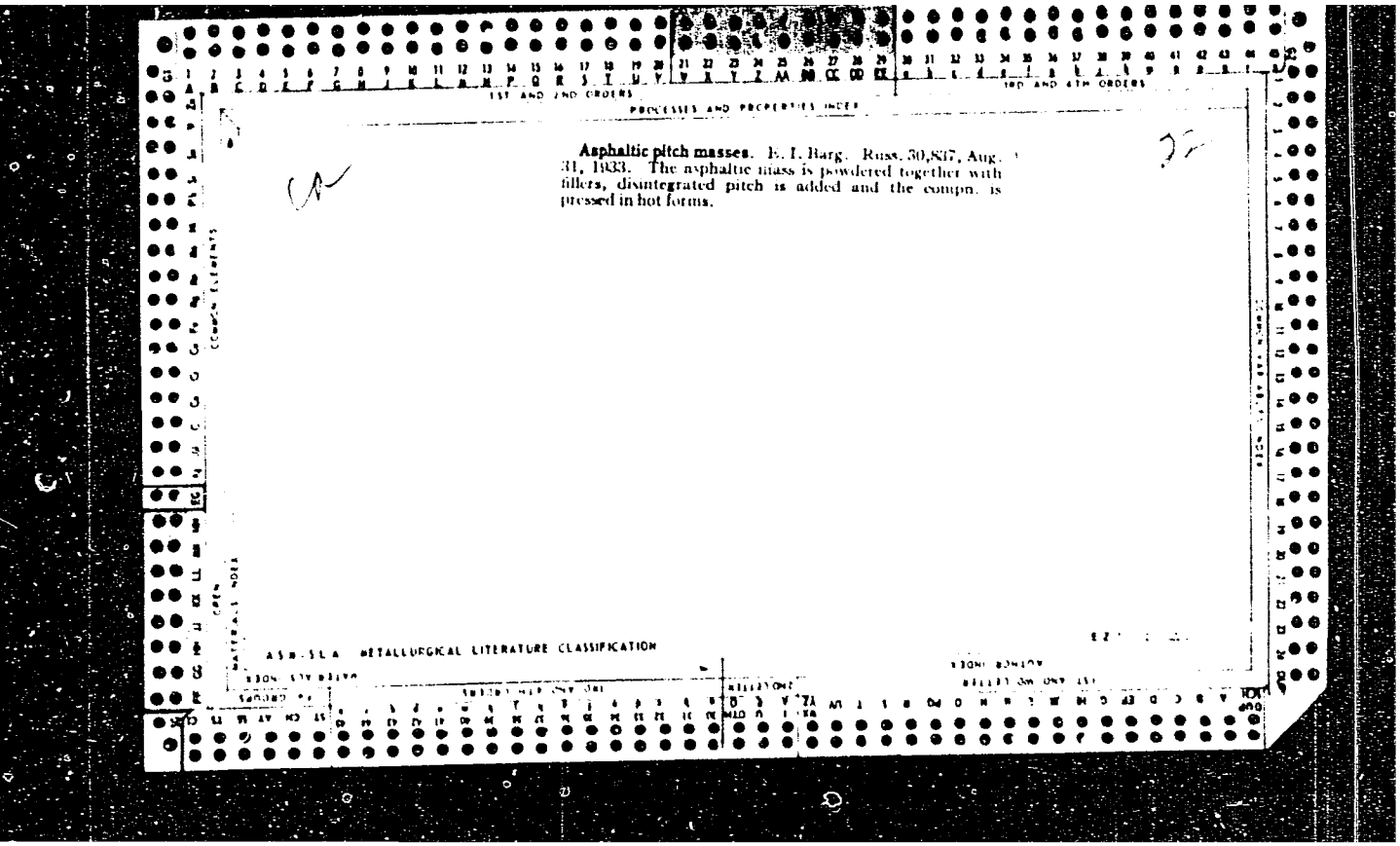
"Disintegration" in mixtures of naphtha, asphalt and coal-tar pitch. F. I. Barg. *Plasticheskie Massui* 1931, No. 1 2, 30 5. Mixts. of naphtha, asphalt and coal-tar pitch, when heated, sep. into 2 layers, each with unsatisfactory properties. If the free C is removed from the pitch, or the oils from the asphalt, good resins are obtained. Natural asphalt gives satisfactory results with untreated pitch. Various theories are considered to explain these facts. G. D. Kreitser. *Ibid* 36. Polonic

H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



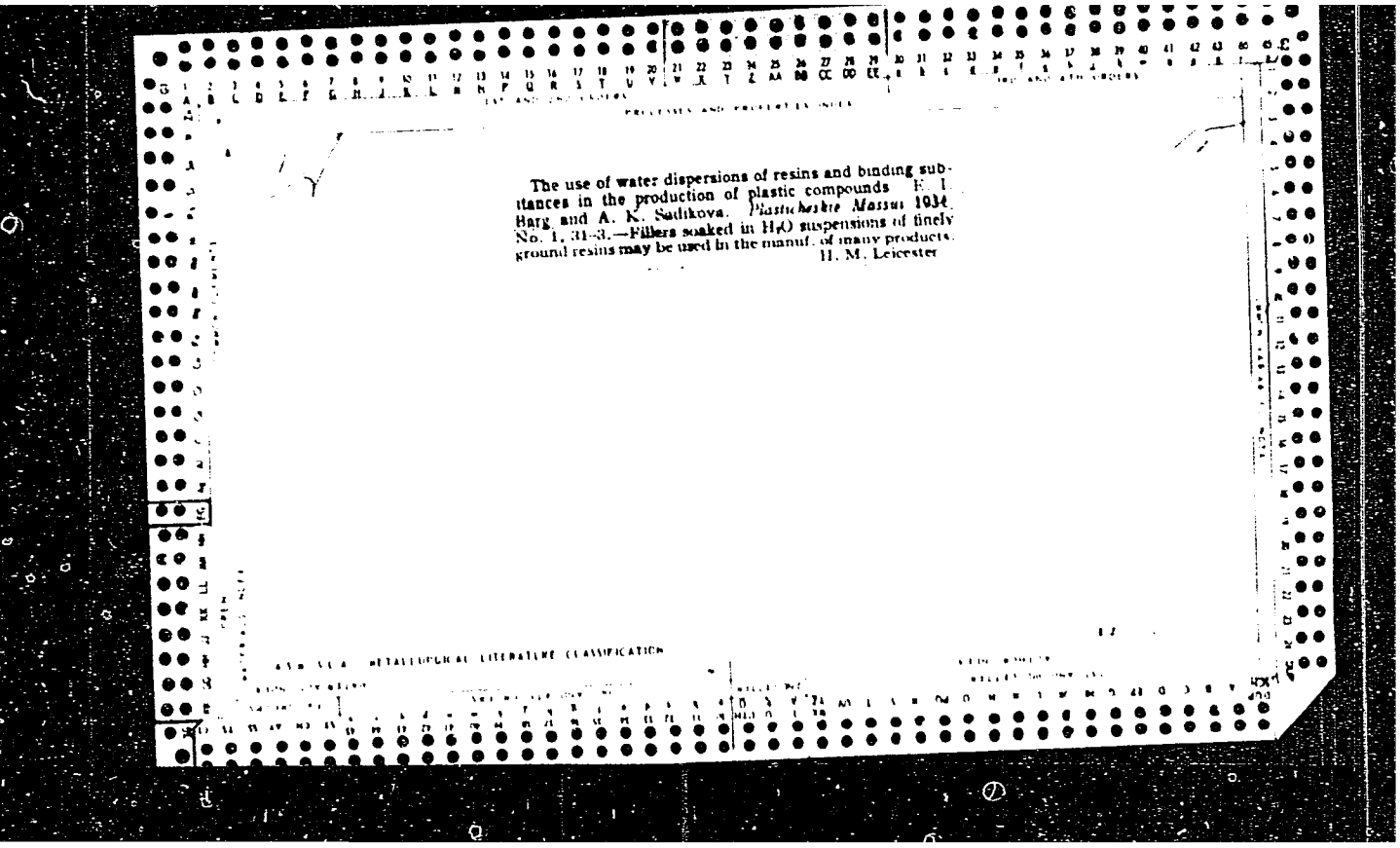
Sealing wax and lead seals with a base of bitumen composition. E. I. Bako. *Plastitcheskie Massui* **1932**, No. 2-4, 20-34. Mixts. of coumarone resins and benzyl-cellulose with chalk give a sealing wax which is the equal of any on a shellac base. Certain naturally occurring Russian asphalts are also good bases for both sealing wax and lead seals for cold pressing. H. M. Leicester



PROCESSES AND PROPERTIES INDEX

Asphaltic pitch masses. E. I. Barg. Russ. 30,837, Aug. 31, 1933. The asphaltic mass is powdered together with fillers, disintegrated pitch is added and the compn. is pressed in hot forms.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The use of water dispersions of resins and binding substances in the production of plastic compounds. E. I. Barg and A. K. Sadikova. *Plasticheskie Massui* 1934, No. 1, 31–3.—Fillers soaked in H_2O suspensions of finely ground resins may be used in the manuf. of many products.
H. M. Leicester

Physicocкhemical processes of mixing asphalts and tars E. I. Barg. *Narodnuĭ Komissariat Tyazheloi Prom. S. S. S. R., Leningrad, Plastmassui* **1**, 253-80(1935). Inhomogeneous mixts. are obtained from oil asphalt with natural asphalt, coal-tar pitch, stearic tars or benzyl cellulose, and from coal-tar pitch and benzylcellulose. Good mixts. result from natural resin with bitumen, wood pitch with coal-tar pitch, and benzylcellulose with natural or coumarin resins. The chem. and phys. structures of the materials are the most important factors in detg. whether or not homogeneous mixts. will be formed. The surface tension of a mixt. is not the av. of the values of the components, and may be lower than either value. This can also cause coagulation. The presence of C particles helps coagulation, but does not necessarily cause it.

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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

The characteristic plastic properties of asphalt and pitch. E. I. Barg and V. N. Khon'kova. *Narodnyi Komissariat Tyazhelol Prom. S. S. S. R., Nauch.-Issledovatel. Inst. Plasticheskikh Mass, Plasticheskie Massy, Sbornik* **2**, 297-300(1937). The temp. interval of plasticity and the ductility are important characteristics of such materials. More stable colloidal structures like the pitches have smaller intervals of plasticity and greater ductility than the less homogeneous asphalts. The temp. interval for a change from the liquid-viscous to the liquid state is about the same for most tars, but the interval from the liquid-viscous to the solid state varies with the individual tar. Methods for measuring these properties are discussed.

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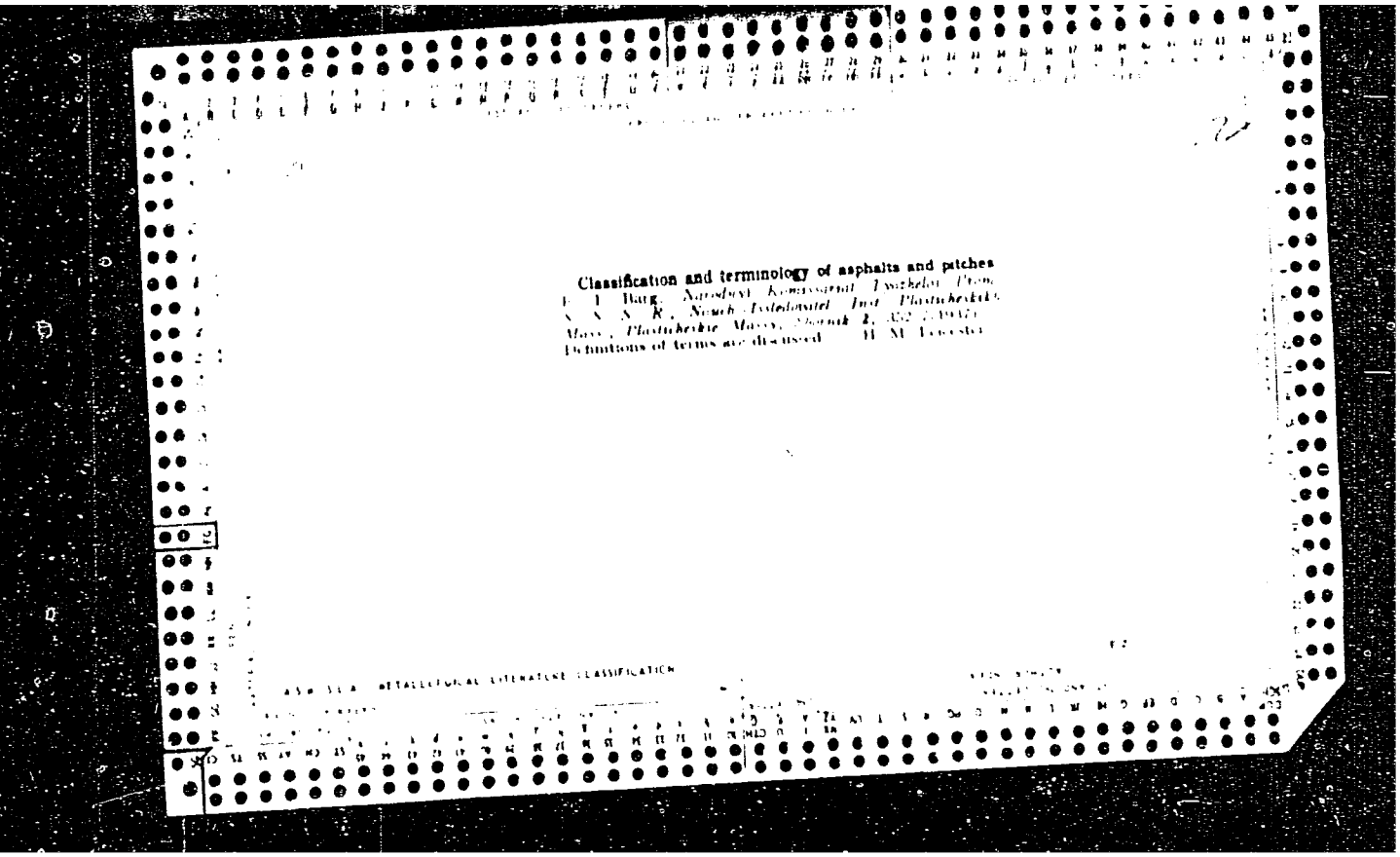

Classification and terminology of asphalts and pitches

Definitions of terms are discussed

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USSR/Physics - Elastic Elongations 11 May 52
of Polymers

"The Problem of Elastic Elongations (Expansions) of Polymers," E. I. Barg, E. M. Spirkovskiy, N. N. Mel'nova, Inst of High-Mol Compds, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 84, No 2, pp 257-260

Authors [illegible] results of investigations of the magnitude of high-elastic elongations of polyvinyl acetates of various mol wts. Authors state that the purpose of the investigations was

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to obtain the elasticity characteristics of a group of polymers by way of defg the max value of inverse elongation, which, according to them, was 10 times greater than theoretically possible. Authors conclude that subject phenomenon can be clarified by taking into consideration the mutual influence of interweaving mols not considered in the kinetic theory of high elasticity. Submitted by Acad ... F. Ioffe 19 Mar 52.

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BARG, E. I.